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Otrag Ends Libyan Launch Work

Brussels—West Germany's Orbital Transport-und Raketen-Aktien gesellschaft (Otrag) has closed down launch operations in Libya, canceling plans to conduct a two-stage rocket launch before year's end.

Frank K. Wukasch, Otrag's president and general manager, said the privately funded company withdrew from Libya about four months ago to avoid political problems with North African nations opposed to the launch program at the Seba Oasis about 500 mi. south of Tripoli.

The shutdown was not opposed by the regime of Libya's Col. Muammar Qadhafi, who had agreed to allow the rocket company to set up operations in Libya after it was forced to leave Zaire. Otrag conducted a series of launches in Zaire in 1977-78.

Otrag successfully tested a low-cost single-stage launch vehicle from Seba Oasis on Mar. 1, which Wukasch said met all parameters for suborbital flight (AW&ST Mar. 23, p. 25). The Libyan flight test was the fourth conducted by Otrag. The other three were carried out in Zaire.

The Libyan test led to charges from the government of Morocco that Qadhañ was using Otrag to acquire technology to develop medium-range missiles. Wukasch denied the charges, and said the original pact between Otrag and Libya did not include passing missile technology to the Qadhañ regime.

Withdrawal from Libya has led to cancellation of plans to launch a two-stage missile from the desert site. The two-stage missile was to have tested an Otrag-developed inertial navigation system to be used to place communications or other satellites into geostationary or low-earth orbits.

Otrag initially offered itself as a private, commercial alternative to space launch programs such as the National Aeronautics and Space Administration and the European Space Agency. Company officials said payloads would be launched at lower prices than otherwise available on the world market. German aerospace officials termed Otrag a tax shelter and said the company had no real plans to launch

Orion Suspension

Los Angeles — Suspension of Navy/Lockheed P-3C Orion production (Awast Dec. 7, p. 20) could curtail the Navy's Update 3 program for improving the antisubmarine alreraft's acoustic sensor and analysis capability, according to Lockheed-California Co. officials.

If production should be suspended, resulting workforce reductions could adversely impact Lockheed's ability to support any improvement program for the P-3C, including the Update 3 activity that is currently in progress (AWAST Aug. 31, p. 83).

Although Defense Dept. officials have decided to suspend production of the P-3C, Lockheed has not received official notification from the Navy and is continuing lobbying efforts in Washington to keep the program alive.

satellites. The Soviet Union claimed that Otrag was being financed by the Central Intelligence Agency in Zaire.

Wukasch said Otrag has not abandoned long-range plans to provide launch systems to private customers, but will concentrate on smaller systems. The company is considering launching a small unit from an established launch site, such as India's facility at Thumba. The launcher would consist of four cluster power units generating 12 metric tons of thrust, he said.

The decision to abandon launch activities in Libya came after the recent resignation of Lutz Kayser, one of the original founders of the firm. Wukasch said Otrag's new management is pursuing a program to insure the survival of the firmincluding the following goals:

- German government scientific agencies in Bonn, which became strained after the company set up launch facilities in Zaire and Libya.
- Promote the company's high-technology skills in private ventures with other West German aerospace and manufacturing companies. Work for other companies in Germany would raise revenues for future rocket launches.
- E Continue the long-range goal of finding a suitable site in a neutral country to be used for launches, including the orbiting of a satellite.

Negotiations are under way with several nations, including some in South America, Wukasch said.

Otrag's 1,500 shareholders agreed to the recent management decision and put up an additional \$10 million to continue company activity through 1982, he said.